

Evaluation of Montana's Residential Methamphetamine Treatment Programs

*Elkhorn Program for Women
Nexus Methamphetamine Treatment Center for Men*



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EXECUTIVE SUMMARY

This report analyzes the information currently being collected by the Nexus and Elkhorn methamphetamine treatment programs in Montana and identifies specific risk factors associated with program non-completion. The work is based on methodologically sound research processes and provides a thorough descriptive profile of this offender population.

The average age of offenders is 35, but half of them are younger than 33; 75% are parents, having on average two children. More than 1 in 4 were abused when they were children themselves. They average 4.75 lifetime felonies, though nearly 14 misdemeanors, and on average they have spent 5 years in prison. Over 40% of the men and nearly twice that many women carry some mental health diagnosis, many of them with psychiatric medication and hospitalization histories.

Overall, 71% of offenders discharged had completed their program (67% of men and 82% of women). At highest risk for discharge prior to completion are those with a mental health diagnosis, Attention Deficit Hyperactivity Disorder as a child and those who were raised outside of Montana. Moreover, counter-intuitively, non-completers had a significantly lower average number of lifetime felonies than completers. Non-completion rates have dropped 50% in the most recent 6 months of program operation and are expected to continue to rise over time.

Necessary and sufficient data collection methods for predicting and tracking recidivism are in place, though not enough offenders have completed the program and passed through prerelease centers to make examination of recidivism trends and risk factors meaningful at this time. The Department of Corrections is advised to continue collecting the variables initially recommended for this study along with the additional pertinent variables identified by the Nexus program.

INTRODUCTION

Montana Code Annotated 45-9-102 indicates that for offenders convicted of a second or subsequent offense of criminal possession of methamphetamine, “the department of corrections may place the person in a residential methamphetamine treatment program operated or approved by the department of corrections....” In September of 2007, the Montana Department of Corrections (DOC), in collaboration with Community Counseling and Correctional Services and Boyd Andrew Community Services, contracted with Research & Survey Consulting (RSC) for program evaluation outcome survey research to assess the efficacy of the Nexus and Elkhorn methamphetamine treatment programs. The ultimate goal was to establish efficient data collection and reporting methods that could be implemented by the department over an extended period of time, enabling the ongoing reporting of data useful for verifying and improving program effectiveness, including the prediction of recidivism.

Dr. Conley, an associate professor at the University of Montana was the principle researcher for this study; Conley and Schantz (2006), had conducted program evaluation research for the DOC prerelease centers previously.

Initial consultations

An initial determination of the evaluability of both programs was completed and the nature of the information being managed by the programs was assessed. On May 29-30, 2007, in anticipation

of the evaluation contract, Dr. Conley visited the sites of both the Nexus program in Lewistown and the Elkhorn program in Boulder. During these visits he was able to assess the nature of the information currently being managed by the programs and to identify readily available data within the planned facility records. He suggested additional data points needed for efficient evaluation/outcome measurement. These visits included interviews with direct care providers at the facilities. The site visits were followed, on May 30, 2007 by a meeting in Helena with Kevin Daugherty and Patrick Swartz of the DOC to further establish goals of evaluation and data streams. On September 3, 2007, just prior to the signing of consultant contracts with each program, Dr. Conley followed up by contacting Ryan Lynch of CCCP and receiving guest access to the Nexus program's electronic case file management system, ClientSystems. Conley made a thorough review of all data fields to determine which would be appropriate to use as predictor variables in a recidivism model – a process intended to verify and improve program effectiveness over time. He provided initial verbal feedback to Mr. Lynch concerning modification of data fields and portability of the output data. Mr. Lynch was advised specifically to consult with his software vendor to assure that data output would be compatible with Microsoft Excel and henceforth Statistics Package for the Social Sciences (SPSS).

Also in early September 2007, Dr. Conley consulted by phone with Mr. Rupert from Elkhorn and made plans for a second visit to the program site. The Elkhorn program was furnished with a copy of the software for SPSS and collaborated with Research & Survey Consulting on its proper use. On October 22, 2007 Dr. Conley met in Butte with Ryan Lynch of the Nexus program and in Boulder with Mike Rupert of the Elkhorn program. In these meetings detailed consultation was provided concerning offender variables that would be useful for verifying and improving program effectiveness and later as predictors of recidivism.

Throughout the winter and spring of 2007-2008 Dr. Conley continued to consult with the programs concerning establishing and refining data collection. Over time, it became increasingly clear that the electronic client file management system in place at Nexus would not be able to generate research level data and a substantial shift in data collection strategy was efficiently negotiated in May/June of 2008 resulting in excellent electronic data on all offenders at the program. Extensive electronic records are kept for Elkhorn offenders and RSC initially anticipated receiving electronic data from that program. A core set of variables was collected from both programs.

METHODOLOGY

Program evaluation methods utilizing secondary analysis of file data as well as survey research was used for this study. The primary strategy was for program staff to collect data from offender records and files. No information was sought which would not normally be in a client record; this was not experimental research and there were no interventions devised for the study. Information concerning variables in offenders' lives is stored electronically and in paper form at both programs and data from this source was selected for study purposes. Appendix A is a memorandum sent to each program outlining common basic variables sought by RSC. The data ultimately provided to RSC by the Elkhorn program was in the form of paper client surveys, which were then hand entered into a research software program. The Nexus program generated and provided additional variables beyond what was initially requested.

Data collection

Data provided by Nexus came in the form of an Excel spreadsheet that was transformed into a data set using Statistical Package for the Social Sciences (SPSS). Elkhorn data came in the form of individual paper survey sheets completed by the offenders themselves and was hand entered into the SPSS set created from the Nexus data. A normal process of re-coding, labeling and transforming the data was necessary to render it amenable to statistical analysis. Ultimately this yielded an information-rich and useful data set.

RESULTS

Aggregated data from both programs was analyzed for frequency distributions of information; in many instances it proved more informative to analyze programs separately. Statistical models were generated to identify risk factors from program non-completion, which may eventually be used to predict recidivism.

Sample Description

Referrals: There were 189 offenders from the Nexus site. The majority (48%) of male offenders come from Montana State Prison. 15% were referred to Nexus from MASC, 9% from START, 7% from Crossroads Correctional Facility, 6% from Yellowstone County Detention Facility, 4% from the Regional Detention Center and 11% from other facilities. The high

Figure 1

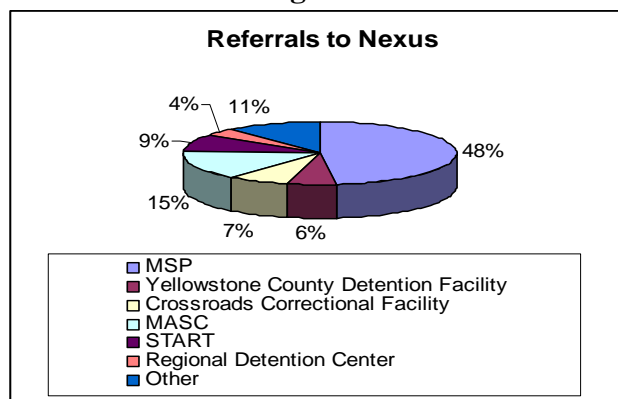
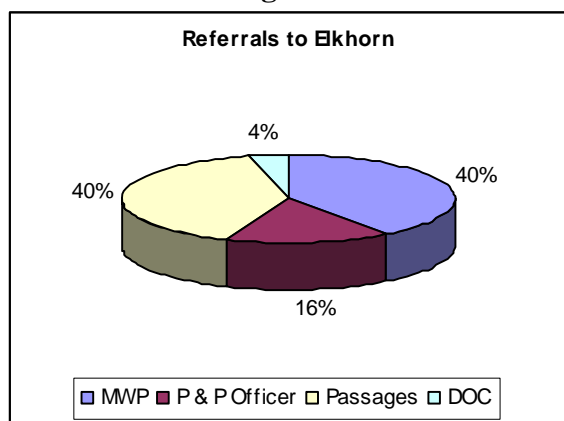


Figure 2



percentage referred from MSP was surprising given the intent of MCA 45-9-102.

There were 82 offenders from the Elkhorn site. 80% of female offenders came from either Montana Women's Prison (40%) or Passages (40%). 16% were referred to Elkhorn from parole and probation officers and 4% from the Department of Corrections.

Prison time/Lifetime felonies, misdemeanors and arrests: 86.5% of all offenders spent some time in prison prior to Nexus or Elkhorn; of these, the average time served in prison was 62.6 months (5 years). The average number of lifetime felonies for male offenders is 5.21; misdemeanors 16.83; and arrests 20.08. For female offenders, the average number of lifetime felonies, misdemeanors and arrests is 3.72, 7.77 and

12.32 respectively. These values all show a statistically significant difference ($p < .05$) between men and women.

Age and Ethnicity: The average age of all offenders is 35, but 50% are under 33 years old. 79.8% of Nexus offenders are white, 15.3% are Native American/American Indian, 2.1% are Hispanic from Mexican descent and 1.1% are black and 0.7% unknown. 61% of Elkhorn offenders are white, 34.1% are Native American/American Indian, 2.4% are Hispanic of Mexican descent, 1.2% are Hispanic of Puerto Rican descent and 1.2% are black. The proportion of Native American/American Indian women is significantly greater than men ($p < .05$). Of those offenders (57 total) who identify as Native American/American Indian, 18.8% report a tribal affiliation of Chippewa Cree, 12.5% are Blackfeet, 10.4% are Salish and Kootenai, 6.3% each affiliate as either Crow, Gros Ventre or Sioux, 4.2% each are either Assiniboine/Sioux, Cree or Little Shell and 2.1% each identify as one of twelve other tribal affiliations (see Appendix B for complete breakdown of tribal affiliations).

Figure 3

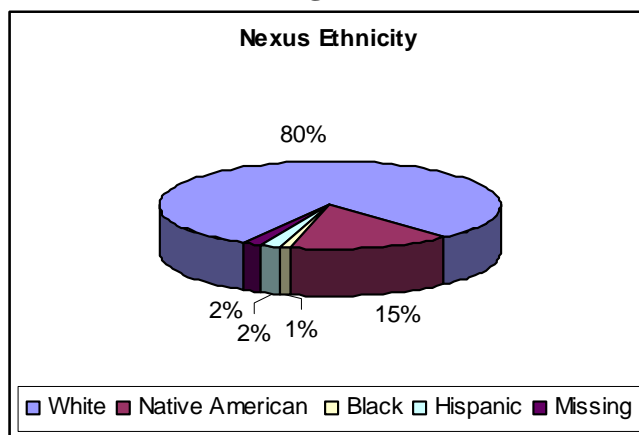
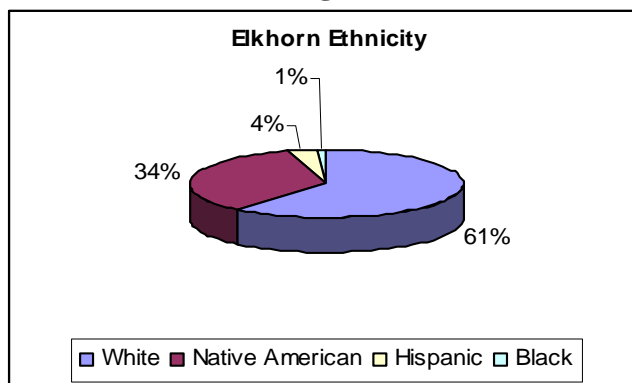


Figure 4



Education level: With regard to education, 59.3% of all Nexus residents hold a GED certificate, 15.9% are high school graduates, 5.3% have “Technical College” level education, 3.7% have an associate’s degree, 1.1% have a master’s degree and 0.5% have either vocational training, a tech degree or a bachelor’s degree. 13.2% of all male offenders noted no academic achievement. Of the Elkhorn offenders, 50.6% have obtained a GED, 19% have a high school diploma (5.1% have some high school, but have not graduated), 8.9% hold an associate’s degree, 6.3% have a technical college level of education, 2.5% have a bachelor’s degree and 1.3% have vocational training.

Marital status: 42.9% of Nexus offenders have never been married, 24.3% are divorced, 20.6% are married and 12.2% are married via common law statute. 33.3% of Elkhorn residents are divorced, 21% have never been married, 21% are married, 16% are married by common law statute, 3.7% are cohabitating, another 3.7% are separated and 1.2% are widowed.

Children: 75% of offenders are parents. Of the Nexus offenders, 32.3% have no children, 51.9% have between one and three children, 14.8% have between four and six children, 0.5% has nine children and 0.5% has twelve children. 11% of the Elkhorn offenders have no children,

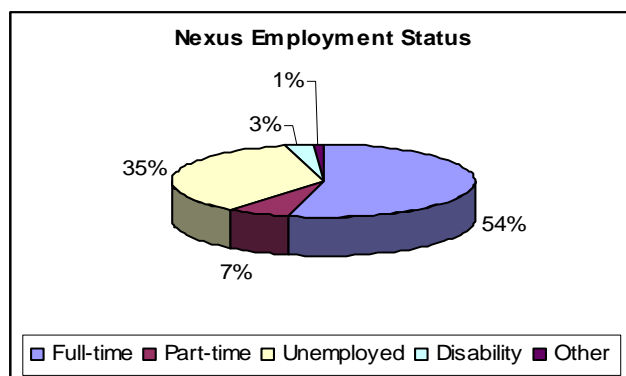
64.7% have between one and three children, 20.7% have between four and six children, 2.4% have seven children and 1.2% have eight children.

Domestic violence, child abuse and neglect: 13.8% of Nexus offenders were reportedly victims of domestic violence, but only 2.2% report that they have stayed at a domestic violence shelter. In contrast, 76.3% of Elkhorn offenders report being victims of domestic violence, and 21% have stayed in a domestic violence shelter. 37.8% of men from Nexus were physically abused or neglected as a child, and 24.7% indicate that they were sexually abused as a child. Of these, only 22% and 28% respectively were placed in the custody of Child Protective Services (CPS) or Department of Child and Family Services (DCFS). 59% of women from the Elkhorn program report a history of childhood abuse or neglect; no information specifically concerning sexual abuse history was gathered for this study though anecdotal evidence suggests that the percentage of women sexually abused as children is higher than for men. Of those women reporting abuse, 22.5% indicate having been in CPS or DCFS custody. Overall, women are twice as likely as men to have been placed in the custody of CPS or DCFS at some point as a child.

Mental illness: Of the Nexus offenders, 41.3% report having a mental health diagnosis. 21.7% have been previously hospitalized or placed in a mental health facility, and 33.9% are taking prescription medication. Of the Elkhorn offenders, 87% have a mental health diagnosis, while 36% report previous hospitalization or placement in a mental health facility and 56% are taking prescription medication. Scores on the Kessler screening instrument indicates that over 40% of the population is positive for mental distress associated with mental illness.

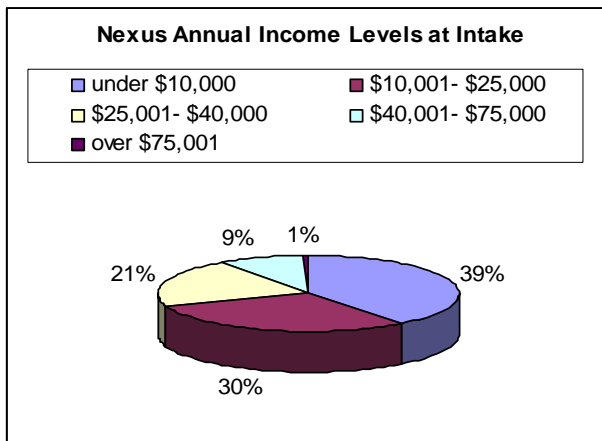
Figure 5

Additional Nexus variables: The additional client information proffered by Nexus proved to be very informative. For example, 32% of male offenders report having a diagnosis of ADHD as a child. In addition, 70.7% of men were raised in Montana. 39% of Nexus offenders have substance-abusing mothers and 60.8% report having a substance-abusing father. 7.1% report that their mother has been convicted of a drug-related crime and 13.2% report that their father has been convicted of a drug-related crime.



Employment: At the time of incarceration, 53.7% of Nexus offenders were reportedly employed full-time, 6.9% were employed part-time, 35.1% were unemployed and 3.2% were on disability. Remaining offenders were either students (1 or 0.5%) or self-employed (1 or 0.5%) at time of incarceration. Also at the time of incarceration, 39.4% of male offenders reported an annual income level under \$10,000, 30.3% made \$10,001-\$25,000 annually, 20.7% reported an annual income of \$25,001-\$40,000 and 9.0% made \$40,001-\$75,000 annually. One respondent (0.5%) claimed an annual income over \$75,001 at time of incarceration.

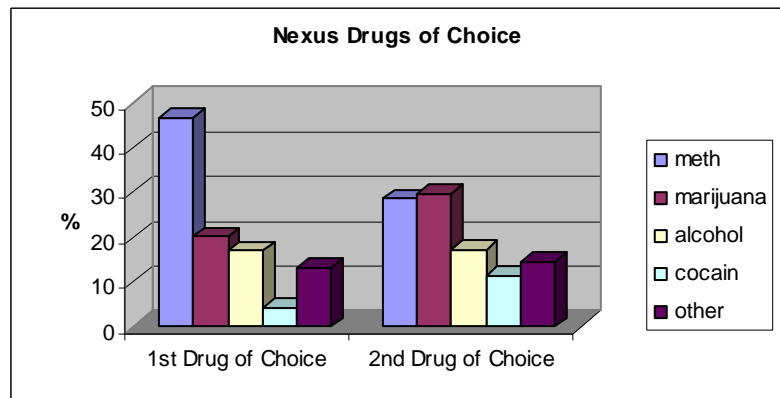
Figure 6



Illegal income: 71.4% of Nexus offenders report selling illegal drugs as an income source, 20.6% report illegally obtaining income via drug manufacture, 21.7% gained illegal income by selling prescription drugs, 24.9% report stealing from their employers as a means of illegal income and 47.1% gained illegal income through stealing from friends and family. 51.9% claim theft of property or burglary as an illegal income source and 28.6% report illegally obtaining income by issuing bad checks. 44.4% of male offenders claim illegal income obtained

through gambling. Other reported illegal sources of income include credit card fraud, shoplifting, using women to make money and “selling myself and others.”

Figure 7



Drugs of choice: 46.6% of male offenders report meth as their first drug of choice, 20.1% report marijuana and 16.9% report alcohol as the first drug of choice. The remainder use cocaine or ‘other.’ Marijuana is listed as second drug of choice for 29.6% of Nexus offenders, meth is reported for 28%, alcohol is second for 17.2% and cocaine is the second drug of choice for 11.3% of men. The remainder use ‘other’. Third drug of choice is alcohol for 23.8% of male offenders, marijuana for 22.5% and cocaine for 18.8%. Meth still comes in with 11.9% but then hallucinogens and prescriptions rise as a preference, with the remainder of offenders listing ‘other’.

Program completion

47% of the cases in the study are still in the program. Of those who completed or were discharged, between both programs, 29% of offenders were discharged prior to completing the program. At Nexus, 67% of offenders completed the program; of the remaining discharges, 17.5% were for disciplinary reasons, 9.7% left against advice, 3.9% were for medical reasons and 1.9% were AWOL.

At Elkhorn, 82.1% of offenders successfully completed the program; the remaining discharges were at the request of staff (including medical, disciplinary and other issues beyond the scope of the program as stated above). This difference in program completion rate is not statistically significant due to the small sample size.

Average length of stay for program completers is 273.54 days (9 months). There is no difference in length of stay between men and women who have completed the program. Average length of stay for program non-completers is 99.1 days (just over 3 months). For men who do not complete the program, average stay is 91 days. For women who do not complete the program, average stay is 143 days. Again, this difference is not statistically significant primarily due to the small sample size.

With regards to the Nexus program, the first six months of admissions saw twice as many offenders fail to complete the program as the second six months. Put another way, the program cut the ‘failure to complete’ rate in half for the second six months of operation, likely reflecting adjustments to population management strategies.

Predicting non-completion: A statistical model (binary logistical regression) was constructed to determine which variables predict non-completion. Four variables together significantly predict this and must be considered risk factors: having a mental illness; having ADHD as part of childhood history (men); being raised outside of Montana (men); and having fewer lifetime felonies.

Analyzing both programs together, 70% of the non-completers have mental illness, 37.8% have a history of hospitalization and 57.9% are on psychiatric medication. Of those who have completed the program, only 47.5% have mental illness, 19.6% have been hospitalized or placed in a mental health facility and 33.7% are taking prescription medication. Of the program non-completers, 51.6% had a diagnosis of ADHD as a child compared to 20% for those who have completed the program. For those offenders who have not completed the program, 46.9% were raised outside Montana while only 25.4% of program completers were raised outside Montana. Non-completers have an average of 3.25 lifetime felonies as compared to an average of 5.10 lifetime felonies for offenders who have completed the program. These findings present substantial implications for treatment, which are addressed in the discussion section of this report.

Table 1. Predicting Non-Completion

Risk Factors	Completers	Non-Completers
Mental Illness Diagnosis	47.5%	70.0%
MI Hospitalization	19.6%	37.8%
MI Prescription Drugs	33.7%	57.9%
ADHD	20.0%	51.6%
Raised outside MT	25.4%	46.9%
Mean Number of Lifetime Felonies	5.10	3.25

Predicting recidivism: This report has identified the risk factors for non-completion of the programs, and the same data may be eventually used for predicting recidivism (identifying high risk cases). However, the 101 successful completers have only been out of the program for an average of 124 days at the time of this report. 93% of these exited to a prerelease and 72% of those are still in prerelease. At this point in time there are not enough completers who have passed through prerelease to make statistical analysis meaningful. Predicting program success, and recidivism in particular, is a key concern that clearly can be addressed with further study.

DISCUSSION

The ultimate goal of this study was to establish efficient data collection and reporting methods that could be implemented by the department over an extended period of time. Enabling ongoing reporting of data useful for verifying and improving program effectiveness, including the prediction of recidivism, has been accomplished.

Setting up a specific methodology and strategy for collecting research level program evaluation data reflects a contemporary and even advanced professional corrections management strategy. This report's author had previously collaborated on a similar study on Montana's existing prerelease centers where acquiring data amenable to constructing predictive models was very challenging (Conley & Schantz, 2006). At this point in time DOC is in a positive position to track this group of methamphetamine related offenders and link characteristics to risk.

Current preliminary information being drawn from this new data system provides a rich environment for determining specific treatment strategies to implement with the current participating population. Variables predicting differences in completion rates is the most outstanding information showing up in early analysis on the limited number of cases available. Clearly, the most predominant factor revealed in the data concerning non completion is the existence of significant mental illness involvement. To be successful in improving completion rates of mentally ill participants, mental illness factors need to be more effectively addressed. This data is consistent with information gathered in the DOC study of the PRC system and also the general literature on co-occurring disorders which indicates high incidences of mental illness among the addicted population.

The factors/variables: 'number of life time felonies' and 'place raised', also have important implications for length of stay. It is clear by implication that lack of connectedness to the community may be a major factor of non completion. If this proves true, efforts to establish stability and community connectedness may lead to higher completion rates. Finally, the fact that completers have roughly 40% higher number of lifetime felonies is worth exploring.

To get an accurate view of the effectiveness of these programs, the DOC must differentiate between "completion rates" and success. Discerning the level of future repeat offences as well as incarceration and hospitalization rates is needed to determine the ultimate success of the program. Accompanying the need for the above information is the need of comparison groups. There are some comparison groups readily available. While easiest is to compare completers to non completers, this does not adequately provide information as to general public health service recipient population or the general DOC parole or prison system. To achieve this information the DOC may choose to utilize a single subject design method comparing rates of recidivism with this group with that of the DOC population of drug offender prior to the implementation of the programs. An additional tool might be incorporated such as that of a 'wait list' comparison group. Comparison to similar populations and programs in other states may also be useful. Additional research questions may also be addressed. For example, is steady employment and economic improvement associated with successful readjustment? When completers do recidivate, is it for a technical violation of probation, or have they committed a new crime?

Recidivism should be defined consistent with the DOC's newly adopted definition based on criteria used by the Association of State Correctional Administrators.

To have a true picture of what is going on with the new programs that are the subject of this study further inquiry is necessary. The questions outlined above and specifically addressed by this study need to be revisited in the future once the programs become more established. With new programs it is common to shift and to change some intervention parameters in the initial phases of implementation. This is already evidenced in the practice changes that have led to lower non-completion rates for the Nexus program over time. A common "rule of thumb" in evaluating new programming to allow a period of three years to transpire before substantial/rigorous evaluation is conducted. In this case the reviewer recommends that further analysis of this data become an ongoing process. Additionally, implementation of new interventions designed to address factors predicting completion should be tracked and included in consideration of timelines for continuing program evaluation activities.

As the data set grows and there is continued tracking of those who have left or completed the program there will be opportunity for gaining important insight that will assist in developing more effective strategies of prevention and intervention for this population. For the Nexus and Elkhorn programs the data collection systems are in place. Insuring continuation of accurate data collection beyond program exit is highly necessary for the development of fiscally and politically satisfactory answers to key questions of interest. Without this continued data it will not be possible to look at recidivism or success rates meaningfully. Fortunately for Montana, the DOC commitment to the inclusion of effective data tracking methods in the creation of these programs provides a significant tool for responding to calls for accountability. In this the DOC is a leader.

Both programs are advised to attend to the risk factors identified for non-completion by developing clinical practice models that take into consideration specific offender's increased risk. For example, a substantial trend with non-completing men is failure at around 90 days, three months, and this would be an appropriate time to consider additional attention. Moreover, the aggregate information profiling this population should be considered for its implication for other treatment programming. For example, one in four men in the program were sexually abused as a child. Treatment literature has established significant links between childhood trauma and addiction later in life. The Nexus program should consider implementing specific trauma group therapy models. At the Elkhorn program, an overwhelming number of women are identified as having mental illness. Future data collection efforts should have this reported by DSM-IV diagnostic code number so a more specific diagnostic profile of this population can be associated with other variables risk factors. The vast majority of mental health diagnoses are described as post-traumatic stress disorder and depression; this poses implications for treatment program models of practice.

Appendix A: Predictor variables requested from both Elkhorn and Nexus

Gender

Ethnicity

This should be broken down fairly extensively and include categories for Asians, Black, Hispanic, White, and Native Americans. The counselor should report not only whether individuals state that they are Native American, but also whether or not they are registered with a tribe, and if so which tribe they registered with. Also, were they raised on or off a reservation? For Hispanics, we should also know their cultural identity by country: Mexico, Brazil, Puerto-Rico etc. Were they raised in the U.S. or the other country?

Date of Birth

Education level

There are different ways to break this down. At the least we should know if they are a high school grad or no, and if yes, GED or traditional HS grad. If less than HS, what grade; if more than HS, do they have a technical certificate, tech degree, 2 or 4-year college degree and/or graduate school if any.

Marital status

Married and if so how many times; cohabitating, divorced, single.

Children

Number of kids and age. Do the kids live with them?

Lifetime felonies

Lifetime misdemeanors

Lifetime arrests

Total time in life served in institutions

DOC programs

What programs? List all and time in each in years and months

The above is fairly general information, some of which can be validated against ACIS. Below is some more specific information that I think will have later predictive value.

Domestic violence history

Any, and if yes, how many partner family violence arrests or convictions?

Was the offender ever a victim of domestic violence?

Ever stayed in domestic violence shelter?

If so, how many months?

Was the offender abused or neglected as a child?

Were they ever in the custody of the Department of Child and Family Services?

Were they raised in part in a foster home?

Mental health history and diagnosis

Ever admitted to a mental health facility?

If so, how many times in your life?

How many months/weeks total in life were spent in a mental health facility?

History of diagnoses

History as documented in mental health records. All offenders should be assessed for MH concerns and if there is a history, the LAC should secure previous records.

The report back to DOC should include specific DSM-IV diagnosis if the client has one.

Is the offender currently taking psychotropic medications?

Kessler 10 item screening tool

I am attaching this tool and advise that all offenders referred for addiction counseling be administered one. We cannot accurately determine the rate of co-occurring disorders if offenders are not screened for mental illness.

Appendix B: Complete Breakdown of Reported Tribal Affiliation

Tribal Affiliation	Percentage
Chippewa Cree	18.8
Blackfeet	12.5
Salish & Kootenai	10.4
Crow	6.3
Gros Ventre	6.3
Sioux	6.3
Assiniboine/Sioux	4.2
Cree	4.2
Little Shell	4.2
Arapaho	2.1
Cherokee	2.1
Chippewa	2.1
Confederate	2.1
Crow/Cheyenne	2.1
Flathead	2.1
Fort Belknap	2.1
Kootenai	2.1
Miaunia	2.1
N. Cheyenne	2.1
Rocky Boy	2.1
Salish	2.1

References:

Conley, T. Schantz, D., (2006). "Predicting and Reducing Recidivism: Factors Contributing to Recidivism in the State of Montana Pre-release Center Population & the Issue of Measurement: A report with recommendations for policy change." On file with Montana Department of Correction and the University of Montana School of Social Work. November 20th, 2006. p. 1-20.